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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER
NGHIEM, MICHAEL P

ART UNIT 2863	PAPER NUMBER
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DATE MAILED: 06/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/881,648

Applicant(s)

BUTLER, NEAL R.

Examiner

Michael P Nghiem

Art Unit

2863

-- The MAILING DATE of this communication appears on the cover sheet with the corresponding address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 May 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,5-9,11-17,19,20 and 22-28 is/are rejected.
- 7) ☒ Claim(s) 2,4,10,18,21 and 29 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

The Communication filed on May 24, 2004 has been acknowledged.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3, 5-9, 11-17, 19, and 22-28 are rejected under 35 U.S.C. 102(b) as being anticipated by Maulenbrugge et al. (US 5,530,238).

Regarding claims 1, 9, and 19, Meulenbrugge et al. discloses an apparatus and method (Figs. 1, 2) comprising:

- a first sensor (1) of an array (12) of sensors to detect radiation and to output a first image signal (S) based on the radiation detected by the first sensor (Figs. 1, 2);
- offset correction circuitry (22) to compensate errors in at least the first image signal and to output at least a corrected first image signal (Sc; Fig. 2), wherein the offset correction circuitry includes means (includes circuit of Figs. 1, 2) for providing at least

one time-varying compensation signal (S_t) that is added to the first image signal to generate the corrected first image signal (Fig. 2).

Regarding claims 3, 13, and 24, Meulenbrugge et al. discloses that the means for providing at least one time-varying compensation signal includes a capacitor (3) and the at least one time-varying compensation signal is based on a charging and a discharging of the capacitor (Fig. 1).

Regarding claims 5, 11, 15, 22, and 26, Meulenbrugge et al. discloses that the means for providing at least one time-varying compensation signal includes means for providing a variable current (variable current from 3).

Regarding claim 6, Meulenbrugge et al. discloses that the means for providing the variable current includes means for adding the variable current to the first image signal such that an average value of the variable current and the first image signal remains essentially constant during a signal sampling period (adding current of S_t to S , Fig. 2).

Regarding claims 7, 12, 16, 23, and 27, Meulenbrugge et al. discloses that the means for providing at least one time-varying compensation signal includes means for providing a variable voltage (variable voltage from 3).

Regarding claim 8, Meulenbrugge et al. discloses that the means for providing the variable voltage includes means for adding the variable voltage to the first image signal such that an average value of the variable voltage and the first image signal remains essentially constant during a signal sampling period (adding voltage of S_t to S , Fig. 2).

Regarding claims 14 and 25, Meulenbrugge et al. discloses generating the time-varying compensation signal such that an average value of the time-varying compensation signal and the first image signal remains essentially constant during a signal sampling period (by adding S_t to S , Fig. 2).

Regarding claims 17 and 28, Meulenbrugge et al. discloses a plurality of sensors (1's) including the first sensor generate respective image signals including the first signal in response to radiation detected by each sensor of the plurality of sensors (Fig. 1), and generating the time-varying compensation signal based on non-uniformities of the sensors (respective decay factor of each image signal, column 3, lines 31-50).

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Meulenbrugge et al. in view of Hegel et al. (US 4,752,694).

Meulenbrugge et al. discloses all the claimed features of the invention except that the first sensor is a microbolometer.

Nevertheless, Hegel et al. discloses a microbolometer array (Abstract, lines 1-5) for the purpose of detecting a radiation signal (75, Fig. 1).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to provide Meulenbrugge et al. with a microbolometer as disclosed by Hegel for the purpose of detecting a radiation signal.

Allowable Subject Matter

3. Claims 2, 4, 10, 18, 21, and 29 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Reasons for Allowance

4. The combination or method as claimed wherein the means for providing at least one time-varying compensation signal includes means for providing a different time-varying compensation signal for at least two sensors of the plurality of sensors (claims 2, 10, 21) or wherein the means for providing at least one time-varying compensation signal includes a compensating source to compensate changes in at least the first image signal due to current-induced heating of at least the first sensor (claims 4, 18, 29) is not disclosed, suggested, or made obvious by the prior art of record.

Response to Arguments

5. Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

Contact Information

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Nghiem whose telephone number is (571) 272-2272. The examiner can normally be reached on M-H from 6:30AM – 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached at (571) 272-2269. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



MICHAEL NGHIEM
PRIMARY EXAMINER

Michael Nghiem

June 1, 2004
